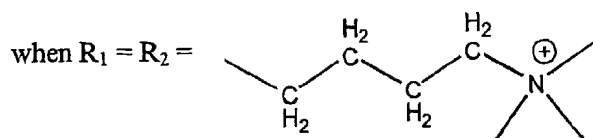


Adenosine Cyclic Ketal (ACK)



and  $R_3, R_4$  and  $R_5$  = hydrogen

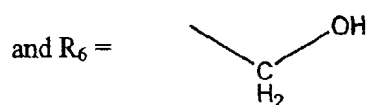


Figure 1A. Chemical structure of adenosine cyclic ketal (ACK) and the chemical formula of the compound nonamethonium adenosine cyclic ketal (nonamethonium ACK).

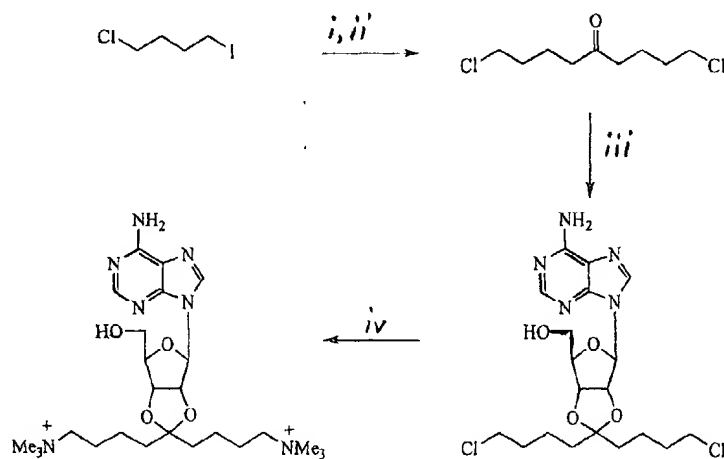


Figure 1B: The synthetic scheme for synthesizing nonamethonium adenosine cyclic ketal. The reagents and conditions are: i) zinc dust, tetrahydrofuran (THF); ii) N-methylpyrrolidine,  $\text{CoBr}_2$ , carbon monoxide; iii) adenosine,  $\text{HCl}$ /dioxane,  $(\text{EtO})_3\text{CH}$ , DMF; iv) 40%  $\text{Me}_3\text{N}$  in  $\text{H}_2\text{O}$ .

Fig. 2A

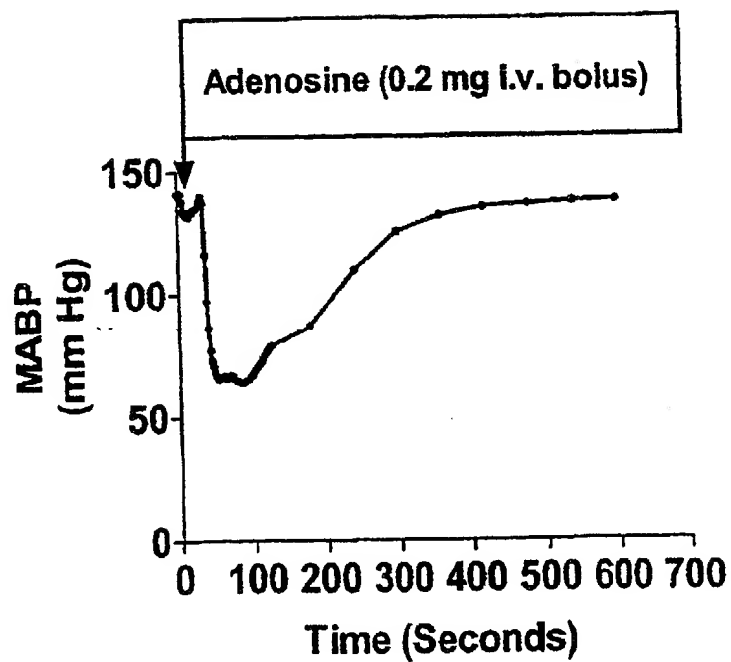


Fig. 2B

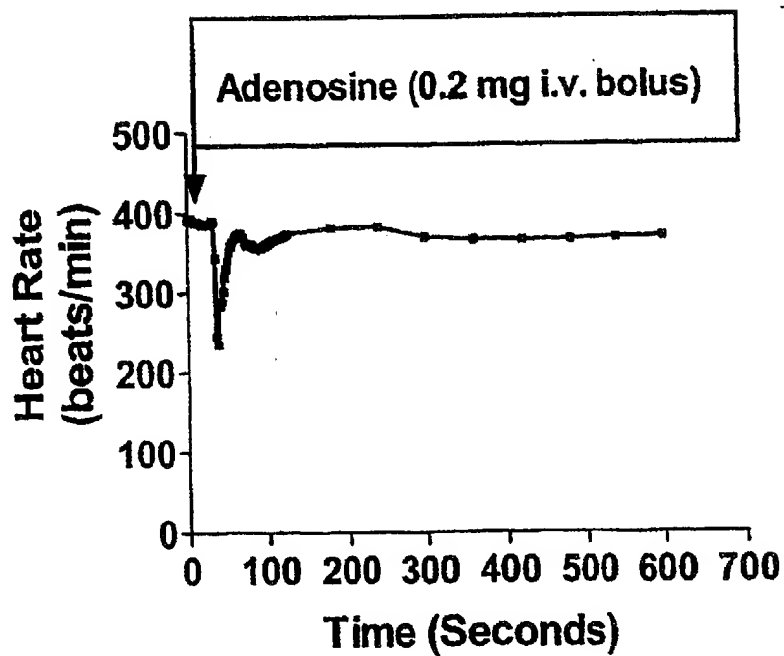


Fig. 3A

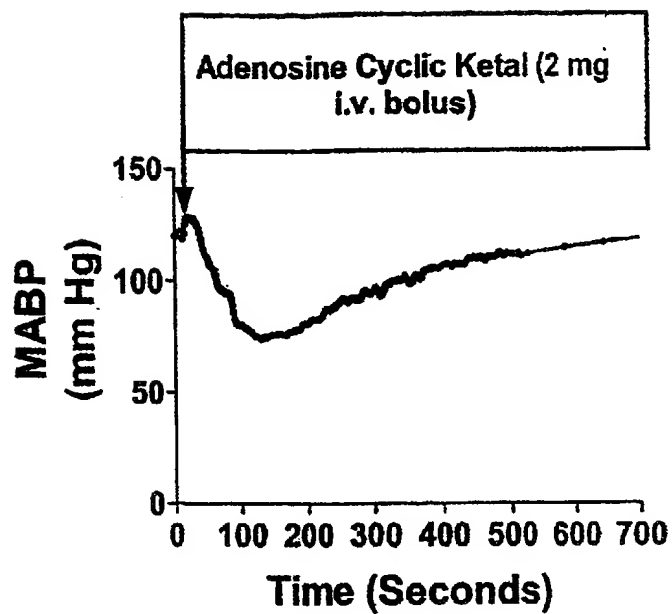


Fig. 3B

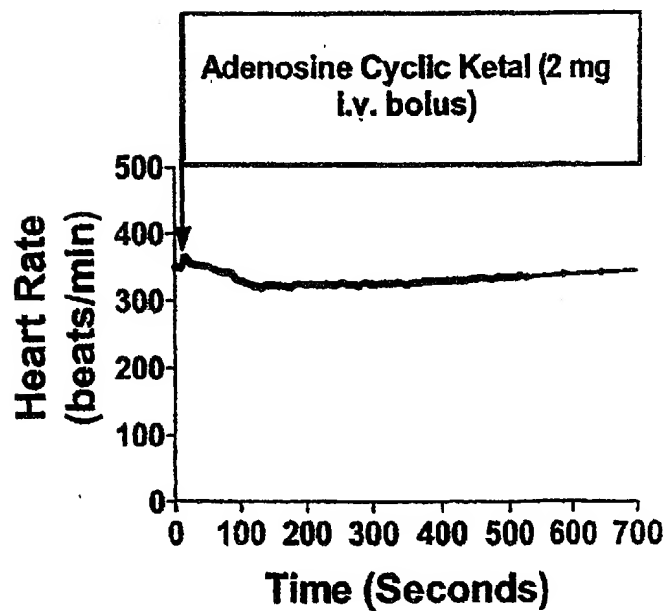


Fig. 4A

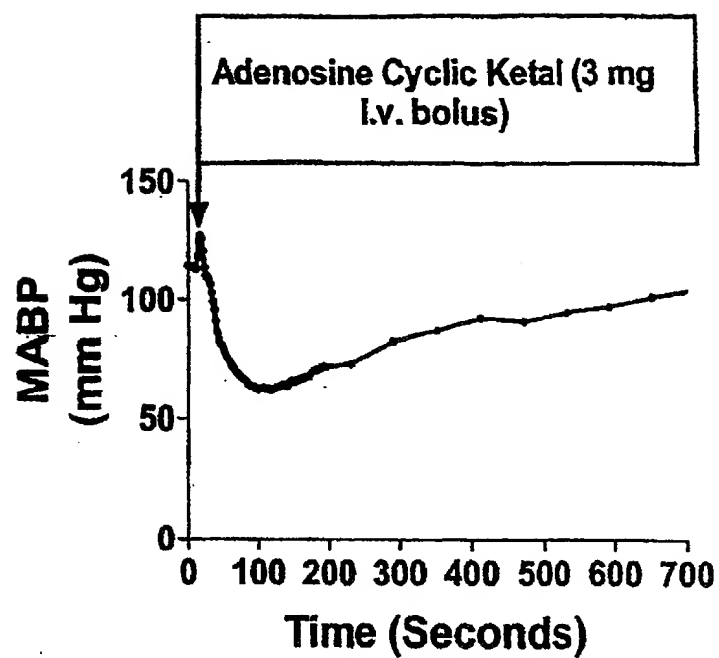
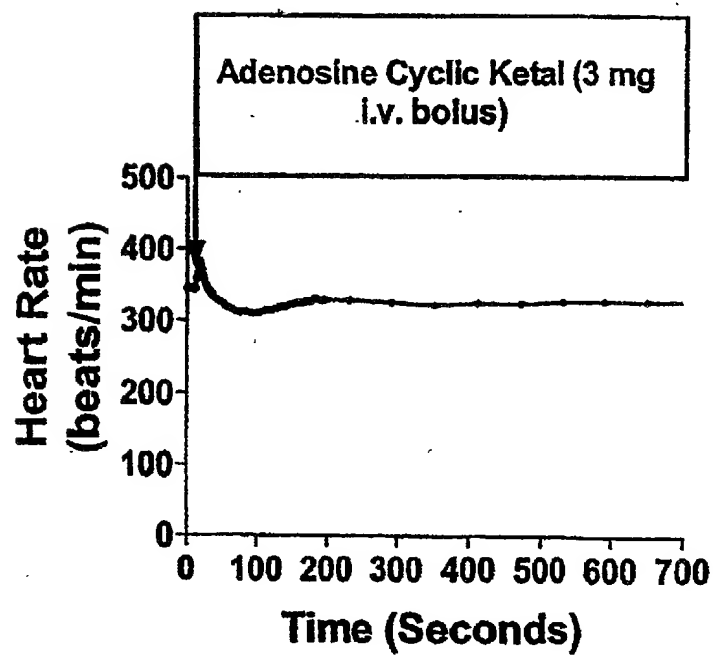
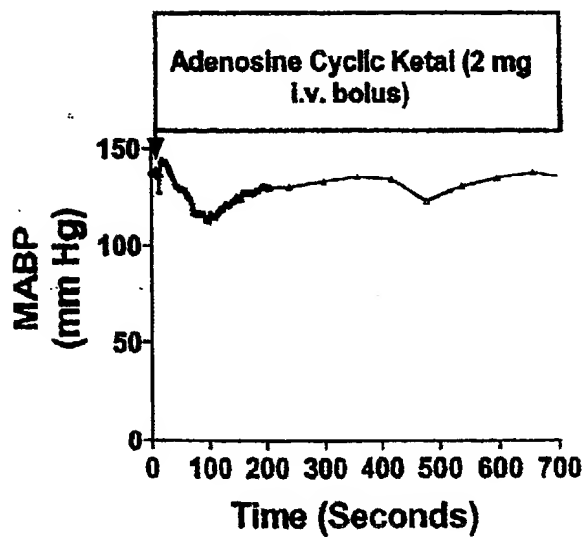


Fig. 4B



Pretreated with DPSPX (10 mg i.v. bolus + 0.15 mg/min)

Fig. 5A



Pretreated with DPSPX (10 mg i.v. bolus + 0.15 mg/min)

Fig. 5B

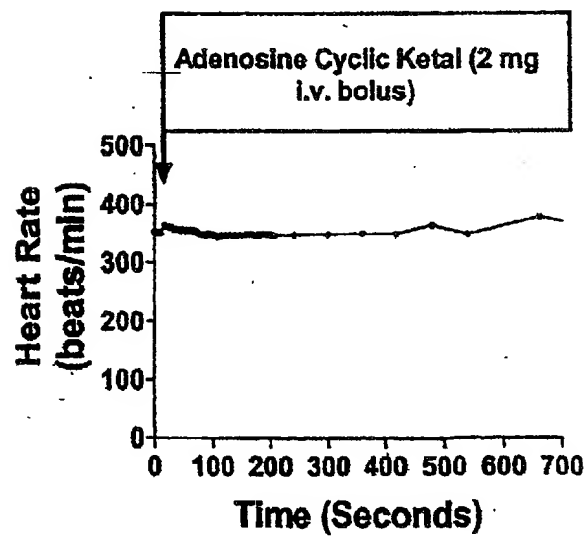


Fig. 6A

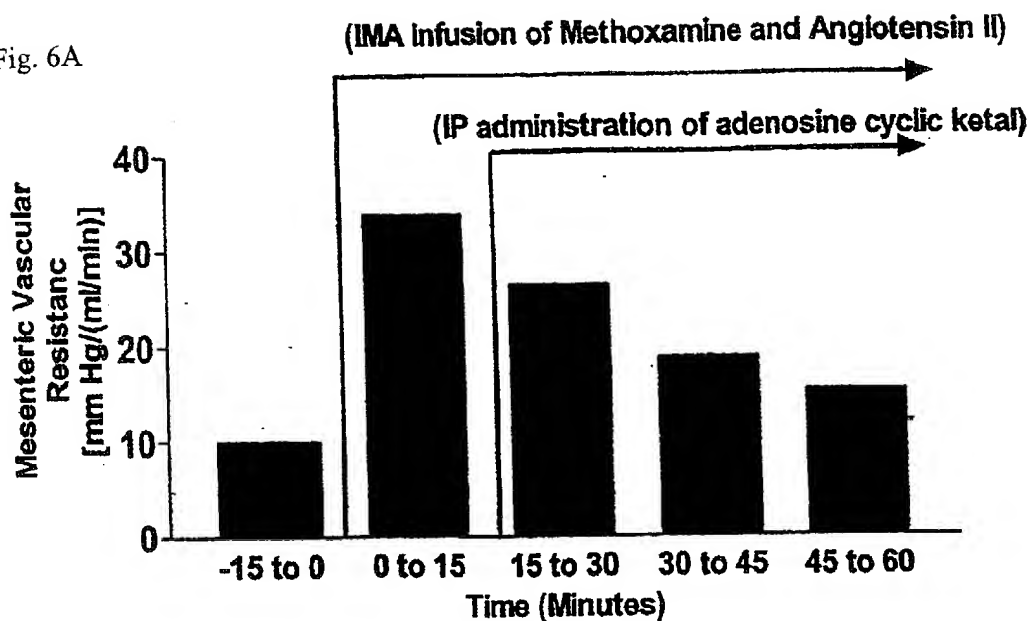


Fig.6B

